



# North Dakota

The U.S. Bioscience Industry: Fostering Innovation and Driving America's Economy Forward

North Dakota's bioscience industry is modest in size but has grown in recent years. State bioscience firms have increased their employment base by 7 percent since 2018 to reach 4,299 industry jobs spanning 602 business establishments in 2021. North Dakota has a specialized employment concentration in two of the industry's subsectors—agricultural feedstock and industrial biosciences and bioscience-related distribution. The state has a strong concentration relative to its size in bioscience-related academic R&D where its \$133 million in research expenditures in 2020 translate to an R&D per capita figure well above the national average. NIH funding to North Dakota institutions has increased in recent years, with \$30 million awarded in 2021.

## Bioscience Performance Metrics

### Summary of State Performance in Selected Bioscience-related Metrics

Metric	North Dakota	United States	Quintile
<b>Bioscience Industry, 2021</b>			
Bioscience Industry Employment	4,299	2,135,704	V
Bioscience Industry Location Quotient	0.75	n/a	III
Bioscience Industry Establishments	602	127,389	V
<b>Academic Bioscience R&amp;D Expenditures, FY 2020</b>			
Bioscience R&D (\$ thousands)	\$133,219	\$51,108,737	IV
Bioscience Share of Total R&D	53%	63%	IV
Bioscience R&D Per Capita	\$171	\$154	II
<b>NIH Funding, FY 2021</b>			
Funding (\$ thousands)	\$30,087	\$34,751,109	V
Funding Per Capita	\$39	\$105	IV
<b>Bioscience Venture Capital Investments, 2018-21 (\$ millions)</b>			
	\$1.94	\$197,674.54	V
<b>Bioscience-Related Patents, 2018-21</b>			
	103	153,072	V

State ranking figures for bioscience performance metrics are calculated as quintiles, where I = top quintile, III = middle quintile, and V = bottom quintile. For source notes, see end of State Profile.

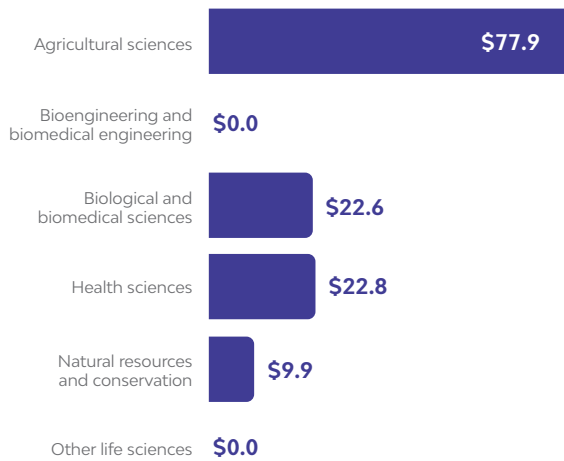
Industry Subsector		North Dakota		United States	
		2021	2018–2021 Change	2021	2018–2021 Change
Agricultural Feedstock and Industrial Biosciences	Establishments	13	-1.9%	1,948	10.0%
	Employment	695	31.7%	69,573	1.9%
	<i>Location Quotient</i>	3.74		n/a	
	Average Annual Wage	\$74,523	6.3%	\$91,989	13.1%
Bioscience- Related Distribution	Establishments	474	5.3%	62,697	14.7%
	Employment	2,520	-4.1%	602,589	6.6%
	<i>Location Quotient</i>	1.57		n/a	
	Average Annual Wage	\$86,417	12.2%	\$121,606	15.0%
Medical Devices and Equipment	Establishments	14	34.1%	10,268	17.4%
	Employment	114	-42.4%	398,847	5.5%
	<i>Location Quotient</i>	0.11		n/a	
	Average Annual Wage	\$63,483	8.2%	\$98,481	8.7%
Pharmaceuticals	Establishments	10	111.1%	5,973	34.7%
	Employment	288	2195.2%	344,839	11.9%
	<i>Location Quotient</i>	0.31		n/a	
	Average Annual Wage	\$92,144	13.7%	\$126,153	10.3%
Research, Testing, and Medical Laboratories	Establishments	92	31.3%	46,503	34.5%
	Employment	682	4.8%	719,856	19.3%
	<i>Location Quotient</i>	0.36		n/a	
	Average Annual Wage	\$88,483	51.5%	\$147,396	22.0%
Total Bioscience Industry	Establishments	602	9.8%	127,389	22.3%
	Employment	4,299	7.0%	2,135,704	11.0%
	<i>Location Quotient</i>	0.75		n/a	
	Average Annual Wage	\$84,600	17.2%	\$125,750	16.4%
Total Private Sector	Establishments	30,763	3.0%	10,665,643	9.3%
	Employment	329,108	-5.1%	123,376,557	-1.5%
	<i>Location Quotient</i>	1.00		n/a	
	Average Annual Wage	\$57,612	8.4%	\$67,826	18.9%

Note: U.S. employment metrics include Puerto Rico.

## Bioscience Research in North Dakota

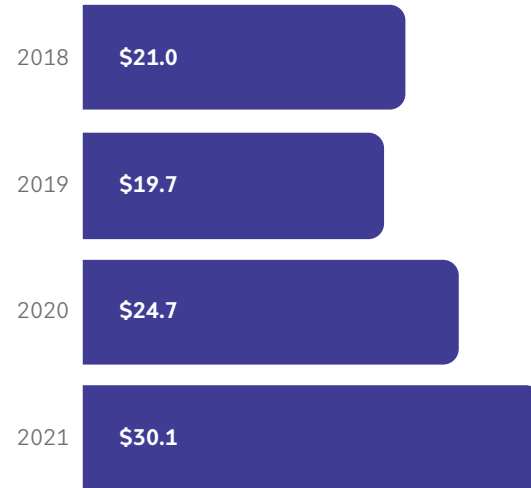
### Bioscience Academic R&D Expenditures

\$ Millions, FY 2020



### NIH Awards

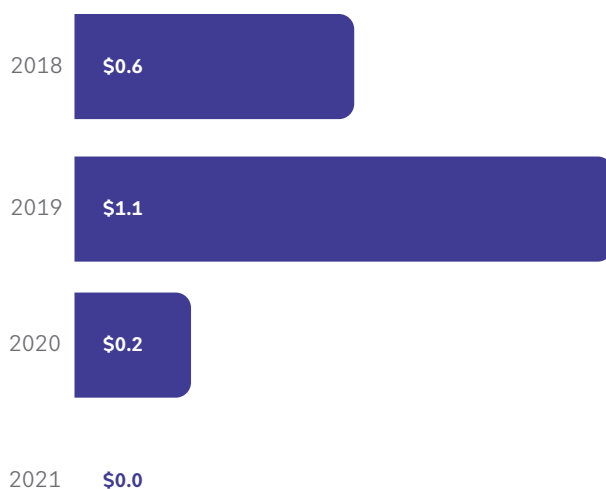
\$ Millions, FY 2018-2021



## Bioscience Venture Capital in North Dakota

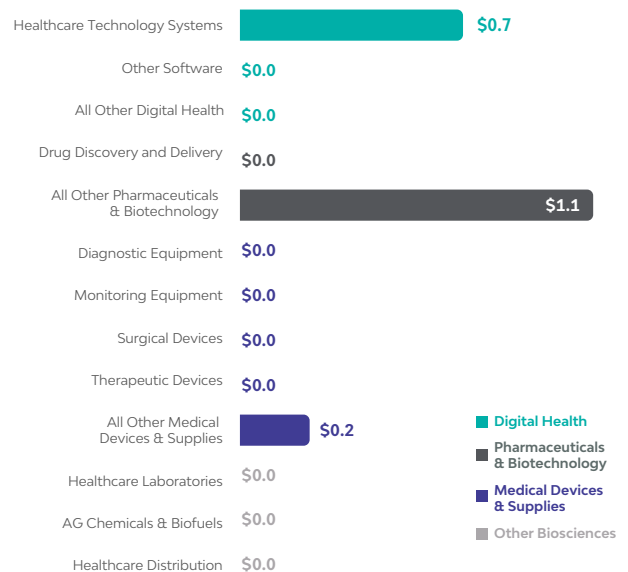
### Bioscience-Related Venture Capital Investments

\$ Millions, 2018-2021



### Bioscience-Related Venture Capital Investments by Segment

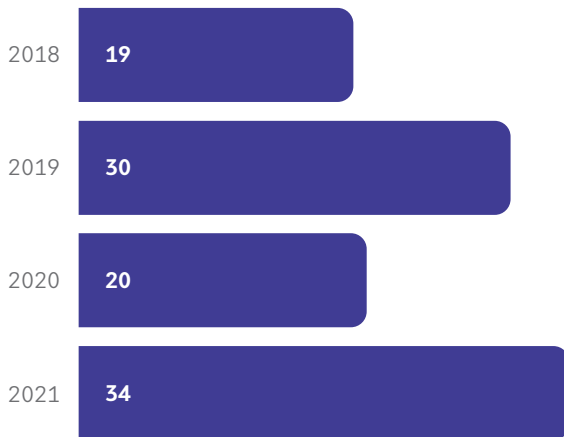
\$ Millions, 2018-2021



## Bioscience Patents in North Dakota

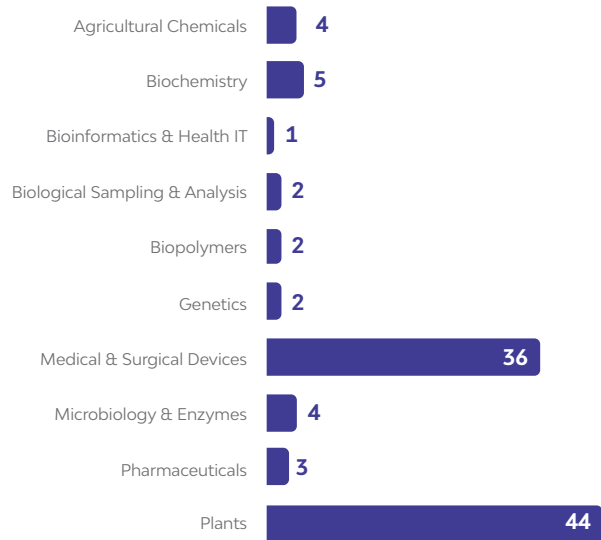
### Bioscience-Related U.S. Patents

2018-2021



### Bioscience-Related U.S. Patents by Segment

2018-2021



## Source Notes

**Employment, Establishments and Wages:** U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages (QCEW), enhanced by Lightcast (Datarun 2022.3).

**Academic R&D Expenditures:** National Science Foundation (NSF), Higher Education Research and Development (HERD) Survey.

**NIH Funding:** National Institutes of Health, NIH Awards by Location & Organization (summary information within RePORT database).

**Venture Capital:** PitchBook Data, Inc.

**Patents:** U.S. Patent & Trademark Office data from Clarivate Analytics’ Derwent Innovation patent analysis database.

*For a more detailed discussion of the data and methodology used, please see the Appendix to the full national report.*